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Just imagine how many millions of trees are cut down yearly to fill the needs of the housing industry. What is this costing our economy? What is it costing our environment? How is this affecting global warming? How safe are these homes? How well do they withstand fires, hurricanes, tornadoes and earthquakes? These days science has given us the possibility to create better housing, without disturbing the environment.

The following construction technology has built such homes. The technology has in fact been tested before. In the previous decades, many attempts have been made with similar methods. Currently, applications are being used all over the world.

Although there are many benefits to this technology, it has not been widely accepted because of the quality and cost of production.

Here I will present a new patented building material called the ECO Panel. This system not only achieves the highest building standards, but delivers them while maintaining its effectiveness in cost and environmental safety.

The ECO Panel represents the integration of styro foam and wire truss. This represents an extremely beneficial material for construction industry and beyond. Such as sound proof walls and much more.

In comparison to traditional building materials, the ECO Panel allows for major flexibility for engineers and architects.

It is easy and quick in regards to building a home as well as less expensive. It produces high quality straight walls.

It provides superior protection from earthquakes, tornados and fire.

In case of flooding, it allows for minimal damage to a structure. For example, if an entire home is flooded with muddy water, in structures built traditionally, the inside of the house would need to be gutted and allowed to dry totally to prevent possible molding. It may take anywhere from 6 months to a year before the home could be occupied again. Not to mention the cost of remodeling. If you were to have the same situation with a structure build with the ECO Panel building technology, there is no wood or drywall that would get wet. The 1 inch thick concrete would get wet, at which point you could hose down the structure, allowing it to dry for a pretty short time and be ready to settle back in.

Obviously, there would be no issues of termites or pests because such pests don't traditionally eat foam, metal or concrete.

This product provides the utmost insulation for weather and noise.

If we are truly concerned about rising construction costs and maintaining high values in structures that withstand fire, flood, earthquake, hurricane, tornadoes and other disasters, you must take a close look at the ECO Panel system.

ECO Panels

In the next few pages, you will be introduced to a revolutionary patented new product called ECO Panel building system. Although a very light panel in weight, they are extremely strong, durable as well as economical. In a normal 4'(1140mm) wide panel, there are ten steel wire trusses, which are placed length-wise in high density foam, making this virtually the strongest disaster resistant construction material.

About ECO Panels

Unsurpassed Engineering

Structures built using insulated concrete are among the fastest growing segment of the building industry. This growth has been driven by the industry's desire to build more efficiency into the construction process. It is also the result of an increased demand for homes with better energy and sound insulation. ECO Panels has taken the sandwich wall technology to a new level.

Our panels are:

1. Simply manufactured. This results in significantly higher panel durability and strength. Our panels are a complete building system. And can be used for floors, roofs, walls, pre-cast sandwich walls, countertops and much more.

2. By far the easiest panels to build with. Our panels have inherent utility chases, allowing builders to easily install utilities (Plumbing, Utility, HVAC, etc.) internally.
3. The most environmentally friendly structural building material in the world.

ECO Panel Building System Advantage

Strength:

Houses built using ECO Panel building system have a wind load capacity of 200 mph+, thus they will easily withstand hurricanes and even F-3 tornadoes. They are also designed to meet the criteria to withstand 8.0+ earthquakes. Because our panels are reinforced and encapsulated by a layer of concrete on both sides, they will resist pests, mold and vermin. They are also water resistant and have the highest fire rating the industry.

Efficient Building System

ECO Panels are not only one of the most environmentally friendly building products in the marketplace today, they are also one of the most environmentally friendly construction system available. The concrete skins on ECO Panels are typically applied with a dry-mix pneumatically applied plaster, the construction process water usage, compared to stucco or tilt-up construction, is greatly reduced.

ECO Panel Cost Savings

Construction Speed

With an experienced crew, ECO Panel structures can be erected in approximately half the time of conventional construction. This translates into lower labor and supervisor costs, lower equipment costs, lower carrying costs, and fewer risks related to weather, fire and theft.

Increased Flexibility

The ECO Panel Building System can be easily cut and modified on site, enabling last-minute changes that otherwise might hold up the construction process.

ECO Panel structures are far easier to renovate than conventional structures.

Since ECO Panel walls carry weight along their entire width, workers generally do not have to avoid load bearing walls or locate studs to proceed with renovation.

With the ECO Panel Building System, curves, arches, etc. are easily and economically achieved.

Savings on Appliances

Because ECO Panel structures offer the highest level of insulation (R-40 performance), builders can install smaller heating and cooling systems, or none at all.

Building Examples

Limitless Design Options

There is no limit as to the styles and finishes you can select for your ECO Panel structure. Whether you want an ultramodern polished concrete finish or a traditional shingle finish with corbels and pediments, our flexible panels can help you achieve the look you desire. Below is one example of a traditional exterior finishes.



What codes do ECO Panels comply with?

ECO Panels are designed in conformance with the American Concrete Institute ACI 318 standard. This means that designs employing ECO Panels will comply with just about any building code, UBC, SBCC, BOCA, etc.

What Is R-Value and what is the insulation value for ECO Panels?

The “R” system is a method of calculating the resistance of building materials to the transmission of heat and cold. The system was designed around conventional construction methods. Because ECO Panels are of such higher quality than conventional construction, the “R” system does not readily predict the thermal performance of ECO Panels. ECO Panels, while only carrying an “R” rating in the high 20’s the “R” performance will be better than R-40. This means that the same house built of conventional wood or metal studs, bat insulation and stucco or wood siding or brick veneer exterior would need to be built to an R-40 standard in order to match the thermal performance of ECO Panel structures.

What is Sound Transmission Coefficient (STC) and what is the STC rating for ECO Panels?

The STC rating on a given material is an indication of how well the material will resist the transmission of sound through it. The higher the rating, the better the material resists sound transmission. For comparison, the typical design standard for an apartment sound wall is 50+. ECO Panels have an STC rating of over 50.

What is the fire rating on ECO Panels?

ECO panels have reinforced concrete skins of a minimum thickness of 1” (25mm), which means

that our panels will have a minimum 90-minute fire rating. In other words, ECO Panels will resist 1800 degrees Fahrenheit for up to 90 minutes. The concrete skin can be thickened to increase this rating up to four hours.

How are electrical and plumbing installed in ECO Panels?

ECO Panels have cores which create channels that are ideal for passing electrical conductors as well as plumbing pipes.

Can shotcrete or gunite be used to apply the concrete skins to ECO Panels?

Dry-mix pneumatically placed concrete is the preferred method of applying concrete skins to our panels; however, the concrete skins can also be applied by hand, machine plastering techniques, or shotcrete, wither wet-mix or dry-mix (gunite).

Are ECO Panels waterproof?

ECO Panels can be waterproofed. The most common methods are either with crystallizing additives in the mix such as Xypex, Kryton, or surface treatments. The surface treatments range from membranes (elastometric, rubber, etc.) to surface applied materials that result in a change in the concrete to create a waterproof skin.

How are pests controlled in ECO Panels?

None of the materials in ECO Panels provide food for pests and vermin. Although the plastic EPS core can provide habitation and/or nesting material, because it is fully enveloped in concrete it is generally inaccessible to pests and vermin.